

**CPC****COOPERATIVE PATENT CLASSIFICATION****C01G****COMPOUNDS CONTAINING METALS NOT COVERED BY SUBCLASSES C01D OR C01F**

(metal hydrides { monoborane, diborane or addition complexes thereof} [C01B 6/00](#); salts of oxyacids of halogens [C01B 11/00](#); peroxides, salts or peroxyacids [C01B 15/00](#); thiosulfates, dithionites, polythionates [C01B 17/64](#); compounds containing selenium, or tellurium [C01B 19/00](#); binary compounds of nitrogen with metals [C01B 21/06](#); azides [C01B 21/08](#); { compounds containing nitrogen, other non-metals and metal [C01B 21/082](#)}; metal amides [C01B 21/092](#); nitrites [C01B 21/50](#); { compounds of noble gases [C01B 23/0005](#)}; phosphides [C01B 25/08](#); salts of oxyacids of phosphorus [C01B 25/16](#); carbides [C01B 31/30](#); compounds containing silicon [C01B 33/00](#); compounds containing boron [C01B 35/00](#); compounds having molecular sieve properties but not having base-exchange properties [C01B 37/00](#); compounds having molecular sieve and base-exchange properties, e.g. crystalline zeolites, [C01B 39/00](#); cyanides [C01C 3/08](#); salts of cyanamide [C01C 3/16](#); thiocyanates [C01C 3/20](#))

**WARNING**

[C2011.12]

Groups [C01G 51/30](#) to [C01G 51/70](#) and [C01G 53/40](#) to [C01G 53/70](#) do not correspond to former or current IPC-groups. The concordance CPC : IPC is as follows:- [C01G 51/30](#) - 51/70 : [C01G 51/00](#)- [C01G 53/40](#) - 53/70 : [C01G 53/00](#)

**C01G 1/00**

**Methods of preparing compounds of metals not covered by subclasses [C01B](#), [C01C](#), [C01D](#), or [C01F](#), in general** (electrolytic production of inorganic compounds [C25B 1/00](#))

**C01G 1/02**

. Oxides

**C01G 1/04**

. Carbonyls

**C01G 1/06**

. Halides

**C01G 1/08**

. Nitrates

**C01G 1/10**

. Sulfates

**C01G 1/12**

. Sulfides

**C01G 1/14**

. Sulfites

**C01G 3/00**

**Compounds of copper**

**C01G 3/003**

. {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

- C01G 3/006 . {Compounds containing, besides copper, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 3/02 . Oxides; Hydroxides
- C01G 3/04 . Halides
- C01G 3/05 . . Chlorides
- C01G 3/06 . . Oxychlorides
- C01G 3/08 . Nitrates
- C01G 3/10 . Sulfates
- C01G 3/12 . Sulfides
- C01G 3/14 . Complexes with ammonia
- C01G 5/00      Compounds of silver**
- C01G 5/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 5/006 . {Compounds containing, besides silver, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 5/02 . Halides
- C01G 7/00      Compounds of gold**
- C01G 7/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 7/006 . {Compounds containing, besides gold, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 9/00      Compounds of zinc**
- C01G 9/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 9/006 . {Compounds containing, besides zinc, two ore more other elements, with the exception of oxygen or hydrogen}
- C01G 9/02 . Oxides; Hydroxides
- C01G 9/03 . . Processes of production using dry methods, e.g. vapour phase processes
- C01G 9/04 . Halides
- C01G 9/06 . Sulfates
- C01G 9/08 . Sulfides

**C01G 11/00**      **Compounds of cadmium**

- C01G 11/003      . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 11/006      . {Compounds containing, besides cadmium, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 11/02      . Sulfides

**C01G 13/00**      **Compounds of mercury**

- C01G 13/003      . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 13/006      . {Compounds containing, besides mercury, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 13/02      . Oxides
- C01G 13/04      . Halides

**C01G 15/00**      **Compounds of gallium, indium or thallium**

- C01G 15/003      . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 15/006      . {Compounds containing, besides gallium, indium, or thallium, two or more other elements, with the exception of oxygen or hydrogen}

**C01G 17/00**      **Compounds of germanium**

- C01G 17/003      . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 17/006      . {Compounds containing, besides germanium, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 17/02      . Germanium dioxide
- C01G 17/04      . Halides of germanium

**C01G 19/00**      **Compounds of tin**

- C01G 19/003      . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 19/006      . {Compounds containing, besides tin, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 19/02      . Oxides
- C01G 19/04      . Halides

- C01G 19/06 . . Stannous chloride
- C01G 19/08 . . Stannic chloride

## **C01G 21/00      Compounds of lead**

- C01G 21/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 21/006 . {Compounds containing, besides lead, two or more other elements, with the exception of oxygen or hydrogen}
- C01G 21/02 . Oxides
  - C01G 21/04 . . Lead suboxide ( $\text{Pb}_2\text{O}$ )
  - C01G 21/06 . . Lead monoxide ( $\text{PbO}$ )
  - C01G 21/08 . . Lead dioxide ( $\text{PbO}_2$ )
  - C01G 21/10 . . Red lead ( $\text{Pb}_3\text{O}_4$ )
- C01G 21/12 . Hydroxides
- C01G 21/14 . Carbonates
- C01G 21/16 . Halides
- C01G 21/18 . Nitrates
- C01G 21/20 . Sulfates
- C01G 21/21 . Sulfides
- C01G 21/22 . Plumbates; Plumbites

## **C01G 23/00      Compounds of titanium** {(preparation of Ti-compounds from ores or scraps [C22B 34/12](#))}

- C01G 23/001 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 23/002 . {Compounds containing, besides titanium, two or more other elements, with the exception of oxygen or hydrogen ([C01G 23/001](#) takes precedence)}
- C01G 23/003 . {Titanates, e.g. titanates of two or more metals other than titanium ([C01G 23/001](#) takes precedence)}
- C01G 23/005 . . {Alkali titanates}
- C01G 23/006 . . {Alkaline earth titanates}
- C01G 23/007 . {Titanium sulfides ([C01G 23/001](#) takes precedence)}
- C01G 23/008 . {Titanium- and titanyl sulfate ([C01G 23/001](#) takes precedence)}
- C01G 23/02 . Halides of titanium
  - C01G 23/022 . . {Titanium tetrachloride}

- C01G 23/024 . . . {Purification of tetrachloride}
- C01G 23/026 . . {Titanium trichloride}
- C01G 23/028 . . {Titanium fluoride}
  
- C01G 23/04 . Oxides; Hydroxides
- C01G 23/043 . . {Titanium sub-oxides}
- C01G 23/047 . . Titanium dioxide
- C01G 23/0475 . . . {Purification}
- C01G 23/053 . . . Producing by wet processes, e.g. hydrolysing titanium salts
- C01G 23/0532 . . . . {by hydrolysing sulfate-containing salts}
- C01G 23/0534 . . . . . {in the presence of seeds}
- C01G 23/0536 . . . . {by hydrolysing chloride-containing salts}
- C01G 23/0538 . . . . . {in the presence of seeds}
- C01G 23/07 . . . Producing by vapour phase processes, e.g. halide oxidation
- C01G 23/075 . . . . {Evacuation and cooling of the gaseous suspension containing the oxide;  
Desacidification and elimination of gases occluded in the separated oxide}
- C01G 23/08 . . . Drying; Calcining; {After treatment of titanium oxide}

## **C01G 25/00      Compounds of zirconium**

- C01G 25/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 25/006 . {Compounds containing, besides zirconium, two or more other elements, with the exception of oxygen or hydrogen}
  
- C01G 25/02 . Oxides
- C01G 25/04 . Halides
- C01G 25/06 . Sulfates

## **C01G 27/00      Compounds of hafnium**

- C01G 27/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 27/006 . {Compounds containing, besides hafnium, two or more other elements, with the exception of oxygen or hydrogen}
  
- C01G 27/02 . Oxides
- C01G 27/04 . Halides
- C01G 27/06 . Sulfates

## **C01G 28/00      Compounds of arsenic**

- C01G 28/001 . {Preparation involving a solvent-solvent extraction, an adsorption or an ion-exchange}

- C01G 28/002 . {Compounds containing, besides arsenic, two or more other elements, with the exception of oxygen or hydrogen ([C01G 28/001](#) takes precedence)}
- C01G 28/004 . . {containing halogen}
- C01G 28/005 . {Oxides; Hydroxides; Oxyacids ([C01G 28/001](#) takes precedence)}
- C01G 28/007 . {Halides ([C01G 28/001](#) takes precedence)}
- C01G 28/008 . {Sulfides ([C01G 28/001](#) takes precedence)}
- C01G 28/02 . Arsenates; Arsenites {([C01G 28/001](#) takes precedence)}
- C01G 28/023 . . {of ammonium, alkali or alkaline-earth metals or magnesium}
- C01G 28/026 . . {containing at least two metals}
  
- C01G 29/00      Compounds of bismuth**
- C01G 29/003 . {Preparations involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 29/006 . {Compounds containing, besides bismuth, two or more other elements, with the exception of oxygen or hydrogen}
  
- C01G 30/00      Compounds of antimony**
- C01G 30/001 . {Preparation involving a solvent-solvent extraction, an adsorption or an ion-exchange}
- C01G 30/002 . {Compounds containing, besides antimony, two or more other elements, with the exception of oxygen or hydrogen ([C01G 30/001](#) takes precedence)}
- C01G 30/003 . . {containing halogen}
- C01G 30/004 . {Oxides; Hydroxides; Oxyacids ([C01G 30/001](#) takes precedence)}
- C01G 30/005 . . {Oxides}
- C01G 30/006 . {Halides ([C01G 30/001](#) takes precedence)}
- C01G 30/007 . . {of binary type  $\text{SbX}_3$  or  $\text{SbX}_5$  with X representing a halogen, or mixed of the type  $\text{SbX}_3\text{X}'_2$  with X, X' representing different halogens}
- C01G 30/008 . {Sulfides ([C01G 30/001](#) takes precedence)}
- C01G 30/02 . Antimonates; Antimonites {([C01G 30/001](#) takes precedence)}
- C01G 30/023 . . {of ammonium, alkali or alkaline-earth metals or magnesium}
- C01G 30/026 . . {containing at least two metals}
  
- C01G 31/00      Compounds of vanadium**
- C01G 31/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 31/006 . {Compounds containing, besides vanadium, two or more other elements, with the

exception of oxygen or hydrogen}

C01G 31/02 . Oxides

C01G 31/04 . Halides

### **C01G 33/00      Compounda of niobium**

C01G 33/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 33/006 . {Compounds containing, besides niobium, two or more other elements, with the exception of oxygen or hydrogen}

### **C01G 35/00      Compounds of tantalum**

C01G 35/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 35/006 . {Compounds containing, besides tantalum, two or more other elements, with the exception of oxygen or hydrogen}

C01G 35/02 . Halides

### **C01G 37/00      Compounds of chromium**

C01G 37/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 37/006 . {Compounds containing, besides chromium, two or more other elements, with the exception of oxygen or hydrogen}

C01G 37/02 . Oxides or hydrates thereof

C01G 37/027 . . Chromium dioxide

C01G 37/033 . . Chromium trioxide; Chromic acid

C01G 37/04 . Chromium halides

C01G 37/06 . . Chromylhalides

C01G 37/08 . Chromium sulfates

C01G 37/10 . . Chrome alum

C01G 37/14 . Chromates; Bichromates

### **C01G 39/00      Compounds of molybdenum**

C01G 39/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 39/006 . {Compounds containing, besides molybdenum, two or more other elements, with the exception of oxygen or hydrogen}

C01G 39/02 . Oxides; Hydroxides

C01G 39/04 . Halides

C01G 39/06 . Sulfides

### **C01G 41/00      Compounds of tungsten**

C01G 41/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 41/006 . {Compounds containing, besides tungsten, two or more other elements, with the exception of oxygen or hydrogen}

C01G 41/02 . Oxides; Hydroxides

C01G 41/04 . Halides

### **C01G 43/00      Compounds of uranium**

C01G 43/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 43/006 . {Compounds containing, besides uranium, two or more other elements, with the exception of oxygen or hydrogen}

C01G 43/01 . Oxides; Hydroxides

C01G 43/025 .. Uranium dioxide

C01G 43/04 . Halides of uranium

C01G 43/06 .. Fluorides

C01G 43/063 ... {Hexafluoride (UF<sub>6</sub>)}

C01G 43/066 .... {Preparation}

C01G 43/08 .. Chlorides

C01G 43/10 .. Bromides

C01G 43/12 .. Iodides

### **C01G 45/00      Compounds of manganese**

C01G 45/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}

C01G 45/006 . { Compounds containing, besides manganese, two or more other elements, with the exception of oxygen or hydrogen (manganates, manganites or permanganates [C01G 45/12](#))}

C01G 45/02 . Oxides; Hydroxides

C01G 45/04 . Carbonyls



- C01G 45/06 . Halides
- C01G 45/08 . Nitrates
- C01G 45/10 . Sulfates
- C01G 45/12 . Manganates { manganites or} permanganates
- C01G 45/1207 . . { Permanganates ([MnO<sub>4</sub>]<sup>-</sup>) or manganates ([MnO<sub>4</sub>]<sup>2-</sup>)
- C01G 45/1214 . . . { containing alkali metals}
- C01G 45/1221 . . { Manganates or manganites with a manganese oxidation state of Mn(III), Mn(IV) or mixtures thereof}
- C01G 45/1228 . . . { of the type [MnO<sub>2</sub>]<sup>n-</sup>, e.g. LiMnO<sub>2</sub>, Li[MxMn<sub>1-x</sub>]O<sub>2</sub> }
- C01G 45/1235 . . . { of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>2-</sup>, e.g. Li<sub>2</sub>Mn<sub>2</sub>O<sub>4</sub>, Li<sub>2</sub>[MxMn<sub>2-x</sub>]O<sub>4</sub> }
- C01G 45/1242 . . . { of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>-</sup>, e.g. LiMn<sub>2</sub>O<sub>4</sub>, Li[MxMn<sub>2-x</sub>]O<sub>4</sub> }
- C01G 45/125 . . . { of the type [MnO<sub>3</sub>]<sup>n-</sup>, e.g. Li<sub>2</sub>MnO<sub>3</sub>, Li<sub>2</sub>[MxMn<sub>1-x</sub>]O<sub>3</sub>, (La,Sr)MnO<sub>3</sub>}
- C01G 45/1257 . . . . { containing lithium, e.g. Li<sub>2</sub>MnO<sub>3</sub>, Li<sub>2</sub>[MxMn<sub>1-x</sub>]O<sub>3</sub>}
- C01G 45/1264 . . . . { containing rare earth, e.g. La<sub>1-x</sub>CaxMnO<sub>3</sub>, LaMnO<sub>3</sub>}
- C01G 45/1271 . . . { of the type [Mn<sub>2</sub>O<sub>8</sub>]<sup>n-</sup>, e.g. (LaSr<sub>3</sub>)Mn<sub>2</sub>O<sub>8</sub>}
- C01G 45/1278 . . . { of the type [Mn<sub>2</sub>O<sub>7</sub>]<sup>n-</sup>, e.g. (Sr<sub>2-x</sub>Ndx)Mn<sub>2</sub>O<sub>7</sub>, Ti<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>}
- C01G 45/1285 . . . { of the type [Mn<sub>2</sub>O<sub>5</sub>]<sup>n-</sup>}
- C01G 45/1292 . . . { of the type [Mn<sub>5</sub>O<sub>12</sub>]<sup>n-</sup>}

#### **C01G 47/00 Compounds of rhenium**

- C01G 47/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 47/006 . {Compounds containing, besides rhenium, two or more other elements, with the exception of oxygen or hydrogen}

#### **C01G 49/00 Compounds of iron**

- C01G 49/0009 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 49/0018 . {Mixed oxides or hydroxides, e.g. ferrites ([C01G 49/0009](#) takes precedence)}
- C01G 49/0027 . . {containing one alkali metal}
- C01G 49/0036 . . {containing one alkaline earth metal, magnesium or lead}
- C01G 49/0045 . . {containing aluminium}
- C01G 49/0054 . . {containing one rare earth metal, yttrium or scandium}
- C01G 49/0063 . . {containing zinc}
- C01G 49/0072 . . {containing manganese}
- C01G 49/0081 . . {containing iron in unusual valence state (IV, V, VI), e.g. ferrates}
- C01G 49/009 . {Compounds containing, besides iron, two or more other elements, with the exception of oxygen or hydrogen}

- C01G 49/02 . Oxides; Hydroxides {(C01G 49/0018 takes precedence)}
- C01G 49/04 . . Ferrous oxide (FeO)
- C01G 49/06 . . Ferric oxide (Fe<sub>2</sub>O<sub>3</sub>)
- C01G 49/08 . . Ferroso-ferric oxide (Fe<sub>3</sub>O<sub>4</sub>)
- C01G 49/10 . Halides {(C01G 49/0018 takes precedence)}
- C01G 49/12 . Sulfides {(C01G 49/0018 takes precedence)}
- C01G 49/14 . Sulfates {(C01G 49/0018 takes precedence)}
- C01G 49/16 . Carbonyls {(C01G 49/0018 takes precedence)}

## C01G 51/00 Compounds of cobalt

- C01G 51/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 51/006 . { Compounds containing, besides cobalt, two or more other elements, with the exception of oxygen or hydrogen (cobaltates C01G 51/40)}
- C01G 51/02 . Carbonyls
- C01G 51/04 . Oxides; Hydroxides
- C01G 51/06 . Carbonates
- C01G 51/08 . Halides
- C01G 51/085 . . {Chlorides}
- C01G 51/10 . Sulfates
- C01G 51/12 . Complexes with ammonia
- C01G 51/30 . { Sulfides}
- C01G 51/40 . { Cobaltates}
- C01G 51/42 . . { containing alkali metals, e.g. LiCoO<sub>2</sub>}
- C01G 51/44 . . . { containing manganese}
- C01G 51/50 . . . . { of the type [MnO<sub>2</sub>]<sup>n-</sup>, e.g. Li(CoxMn<sub>1-x</sub>)O<sub>2</sub>, Li(MyCoxMn<sub>1-x-y</sub>)O<sub>2</sub>}
- C01G 51/52 . . . . { of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>2-</sup>, e.g. Li<sub>2</sub>(CoxMn<sub>2-x</sub>)O<sub>4</sub>, Li<sub>2</sub>(MyCoxMn<sub>2-x-y</sub>)O<sub>4</sub>}
- C01G 51/54 . . . . { of the type [Mn<sub>2</sub>O<sub>4</sub>]<sup>-</sup>, e.g. Li(CoxMn<sub>2-x</sub>)O<sub>4</sub>, Li(MyCoxMn<sub>2-x-y</sub>)O<sub>4</sub>}
- C01G 51/56 . . . . { of the type [MnO<sub>3</sub>]<sup>2-</sup>, e.g. Li<sub>2</sub>[CoxMn<sub>1-x</sub>O<sub>3</sub>], Li<sub>2</sub>[MyCoxMn<sub>1-x-y</sub>O<sub>3</sub>]}
- C01G 51/58 . . . . { of the type [Mn<sub>2</sub>O<sub>8</sub>]<sup>n-</sup>}
- C01G 51/60 . . . . { of the type [Mn<sub>2</sub>O<sub>7</sub>]<sup>n-</sup>}
- C01G 51/62 . . . . { of the type [Mn<sub>2</sub>O<sub>5</sub>]<sup>n-</sup>}
- C01G 51/64 . . . . { of the type [Mn<sub>5</sub>O<sub>12</sub>]<sup>n-</sup>}
- C01G 51/66 . . { containing alkaline earth metals, e.g. SrCoO<sub>3</sub>}

- C01G 51/68 . . . { containing rare earth, e.g.  $\text{La}_{0.3}\text{Sr}_{0.7}\text{CoO}_3$  }
- C01G 51/70 . . { containing rare earth, e.g.  $\text{LaCoO}_3$  ([C01G 51/68](#) takes precedence) }

## **C01G 53/00 Compounds of nickel**

- C01G 53/003 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 53/006 . { Compounds containing, besides nickel, two or more other elements, with the exception of oxygen or hydrogen (**nickelates** [C01G 53/40](#)) }
- C01G 53/02 . Carbonyls
- C01G 53/04 . Oxides; Hydroxides
- C01G 53/06 . Carbonates
- C01G 53/08 . Halides
- C01G 53/09 . . Chlorides
- C01G 53/10 . Sulfates
- C01G 53/11 . Sulfides
- C01G 53/12 . Complexes with ammonia
- C01G 53/40 . { **Nickelates** }

### **WARNING**

Groups [C01G 53/40](#) to [C01G 53/70](#) are not complete pending a reorganisation, see also [C01G 53/006](#) and [C01G 53/00](#)

- C01G 53/42 . . { containing alkali metals, e.g.  $\text{LiNiO}_2$  }
- C01G 53/44 . . . { containing manganese }
- C01G 53/50 . . . . { of the type  $[\text{MnO}_2]_n^-$ , e.g.  $\text{Li}(\text{NixMn}_{1-x})\text{O}_2$ ,  $\text{Li}(\text{MyNixMn}_{1-x-y})\text{O}_2$  ]
- C01G 53/52 . . . . { of the type  $[\text{Mn}_2\text{O}_4]^{2-}$ , e.g.  $\text{Li}_2(\text{NixMn}_{2-x})\text{O}_4$ ,  $\text{Li}_2(\text{MyNixMn}_{2-x-y})\text{O}_4$  ]
- C01G 53/54 . . . . { of the type  $[\text{Mn}_2\text{O}_4]^-$ , e.g.  $\text{Li}(\text{NixMn}_{2-x})\text{O}_4$ ,  $\text{Li}(\text{MyNixMn}_{2-x-y})\text{O}_4$  ]
- C01G 53/56 . . . . { of the type  $[\text{MnO}_3]^{2-}$ , e.g.  $\text{Li}_2[\text{NixMn}_{1-x}\text{O}_3]$ ,  $\text{Li}_2[\text{MyNixMn}_{1-x-y}\text{O}_3]$  ]
- C01G 53/58 . . . . { of the type  $[\text{Mn}_2\text{O}_8]_n^-$  ]
- C01G 53/60 . . . . { of the type  $[\text{Mn}_2\text{O}_7]_n^-$  ]
- C01G 53/62 . . . . { of the type  $[\text{Mn}_2\text{O}_5]_n^-$  ]
- C01G 53/64 . . . . { of the type  $[\text{Mn}_5\text{O}_{12}]_n^-$  ]
- C01G 53/66 . . { containing alkaline earth metals, e.g.  $\text{SrNiO}_3$ ,  $\text{SrNiO}_2$  }
- C01G 53/68 . . . { containing rare earth, e.g.  $\text{La}_{1.62}\text{Sr}_{0.38}\text{NiO}_4$  }
- C01G 53/70 . . { containing rare earth, e.g.  $\text{LaNiO}_3$  ([C01G 53/68](#) takes precedence) }

## **C01G 55/00 Compounds of ruthenium, rhodium, palladium, osmium, iridium, or platinum**

- C01G 55/001 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 55/002 . {Compounds containing, besides ruthenium, rhodium, palladium, osmium, iridium, or platinum, two or more other elements, with the exception of oxygen or hydrogen ([C01G 55/007](#) takes precedence)}
- C01G 55/004 . {Oxides; Hydroxides}
- C01G 55/005 . {Halides}
- C01G 55/007 . {Compounds containing at least one carbonyl group}
- C01G 55/008 . . {Carbonyls}
  
- C01G 56/00      Compounds of transuranic elements**
- C01G 56/001 . {Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 56/002 . . {by adsorption or by ion-exchange on a solid support}
- C01G 56/003 . {Compounds comprising, besides transuranic elements, two or more other elements, with the exception of oxygen or hydrogen ([C01G 56/001](#) takes precedence)}
- C01G 56/004 . {Compounds of plutonium ([C01G 56/001](#) takes precedence)}
- C01G 56/005 . . {Oxides; Hydroxides}
- C01G 56/006 . . {Halides}
- C01G 56/007 . {Compounds of transuranic elements ([C01G 56/001](#) and [C01G 56/004](#) take precedence)}
- C01G 56/008 . . {Compounds of neptunium}
- C01G 56/009 . . {Compounds of americium}
  
- C01G 99/00      Subject matter not provided for in other groups of this subclass**
- C01G 99/003 . { Preparation involving a liquid-liquid extraction, an adsorption or an ion-exchange}
- C01G 99/006 . { Compounds containing, besides a metal not provided for elsewhere in this subclass, two or more other elements other than oxygen or hydrogen ([C01G 99/003](#) takes precedence)}